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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,482	02/05/2004	Yibei Ling	APP 1484	4980

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EXAMINER	
ZEWDU, MELESS NMN	
ART UNIT	**PAPER NUMBER**
2683	

DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/772,482	LING ET AL.	
	Examiner	Art Unit	
	Meless N. Zewdu	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *9/30/05*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5, 7-11 and 13-19* is/are rejected.

7)☒ Claim(s) *6,12 and 20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the communication filed on 9/30/05.

2. Claims 1-20 are pending in this action.

3. The objection to the drawings has been withdrawn in response to applicant's clarification of the issue raised by examiner.

4. The rejection of claim 20, under 35 USC § 112, second paragraph has been withdrawn in consequence with applicant addressing the issue raised by examiner.

5. This action is final.

Specification

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. In the remarks section of the response filed on September 30, 2005, applicant has included www.yahoo.com, (see page 6) in the amendment to the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gao et al. (Gao) (US 2004/0067754 A1) in view of Dunn et al. (Dunn) (US 6,591,103 B1).

As per claim 8: Gao discloses a method of handing off a user device from a first network to a second network (see abstract), said method comprising:

establishing a session on said user device with said first network (see abstract). Established a session on a user device is inherent in a handover procedure.

determining that said user device is in an area where said first network and said second network overlap (see page 3, paragraphs 0026- 0027, 0030; page 4, paragraph 0036; page 5, paragraph 0043).

handing off said user device from said first network to said second network (see abstract; page 4, paragraph 0036; claims 15 and 16). But, Gao does not explicitly teach about a user device determining that the area/location it is in is an area overlapped by a first and second network, as claimed by applicant. However, in a related field of endeavor, Dunn teaches about providing users' carrier selection in overlapping heterogeneous networks (see fig. 1; col. 4, lines 37-40) wherein user devices are equipped with a GPS receiver and are capable of determining their location (see col. 3, lines 34-36). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Gao with that of Dunn for the

advantage of providing users carrier selection in overlapping heterogeneous networks (see col. 3, lines 5-8).

As per claim 10: a method, wherein said second network operates at a higher bandwidth than said first network (see page 5, paragraph 0049). The prior art's network can supports varying handover requirements including bandwidth requirement to maintain QOS. In other words, if the quality of service at the current bandwidth is not suitable to a user, it can be changed to another bandwidth (including from lower to higher or from higher to lower).

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goa in view of Wu (US 2002/0082015 A1).

As per claim 1: the limitations of claim 1 are similar to the limitations of claim 8, except one difference, as provided below. Hence, the similar limitations of claim 1 are rejected on the same ground as claim 8. But, regarding the difference, limitation, Gao does not explicitly teach about a proxy for use with a user device operating in a heterogeneous wireless network environment, as claimed by applicant. However, in a related field of endeavor, Wu teaches about method and system that include at least one proxy operating in a heterogeneous wireless network environment (see entire document, particularly, abstract; fig. 1, elements 111 and 112; page, paragraph 0008-page 2, paragraph 0020; page 2, paragraph 0028-page 3, paragraph 0029). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Gao with that of Wu for he advantage of transferring a

communication session from one service area to another in a format that is suitable to a mobile device (see page 1, paragraphs 0001-0003).

As per claim 3: Gao teaches a method, wherein said second network operates at a higher bandwidth than said first network (see page 5, paragraph 0049). The prior art's network can supports varying handover requirements including bandwidth requirement to maintain QOS. In other words, if the quality of service at the current bandwidth is not suitable to a user, it can be changed to another bandwidth (including from lower to higher or from higher to lower).

Claims 14, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gao in view of Wu and Labun et al. (Labun) (US 6,842,621 B2).

As per claim 14: Gao discloses an architecture for use in a heterogeneous network environment (see figs. 2 and 5; abstract), said architecture comprising:

a user device (see fig.2, element 120; page 2, paragraph 0020).

heterogeneous wireless environment (see abstract; page 2, paragraph 0012).

But, Gao does not explicitly teach about a user device having an installed web browser and a web browser, as claimed by applicant. However, in a related field of endeavor, Labun teaches a communication system wherein a mobile device is provided a WAP browser to browse a web server (see fig. 1, elements 102, 104 and 108, 122; abstract; col. 1, lines 15-col. 2, line 37; col. 2, line 63-col. 3, line 47; col. 4, lines 28-42). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Gao's mobile device with that of Labun for the advantage of browsing the internet via a mobile communication device, as taught by Labun (see

col. 1, lines 15-52). But, Gao in view of Labun does not explicitly teach a proxy interposed between said web browser and said web server; and an information gateway interposed between said proxy and said web server, as claimed by applicant. However, in a related field of endeavor, Wu teaches about a communication's architecture wherein a proxy is interposed between a web browser and a web server, including an information gateway interposed between the proxy and the web server (see fig. 1, elements 104 (mobile with rowser), 111 (proxy), 103 (gateway) and 105 (server); page 2, paragraph 0028-page 3, paragraph 0029; page 3, paragraph 0032; page 3, paragraph 0039-page 4, paragraph 0040). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of Wu for the advantage of transferring communication session from one service area to another (see abstract; page 1, paragraphs 0001-0003).

As per claim 15: the features of claim 15 are similar to the features of claim 1. Hence, claim 15 is rejected on the same ground and motivation as claim 1.

As per claim 17: Gao teaches a method, wherein said second network operates at a higher bandwidth than said first network (see page 5, paragraph 0049). The prior art's network can supports varying handover requirements including bandwidth requirement to maintain QOS. In other words, if the quality of service at the current bandwidth is not suitable to a user, it can be changed to another bandwidth (including from lower to higher or from higher to lower).

Claims 2, 9 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claim 1 above, and further in view of Dilman et al. (Dilman) (US 2002/0138599 A1).

As per claim 2: but, the above references do not explicitly teach about means combining both event driven and polling-based schemes for detecting changes in network conditions. However, in a related field of endeavor, Dilman teaches about a network monitoring means/technique that combines both event driven and polling schemes (see abstract). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references for the advantage of significantly reducing the amount of monitoring traffic (see abstract).

As per claim 9: the features of claim 9 are similar to the features of claim 2. Hence, claim 9 is rejected on the same ground and motivation as claim 2.

As per claim 16: the features of claim 16 are similar to the features of claim 2. Hence, claim 16 is rejected on the same ground and motivation as claim 2.

Claims 4-5, 11 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to the claims above, and further in view of Millad et al. (Millard) (US 2003/0093341 A1).

As per claim 4: the above references do not explicitly tech about a proxy comprising means to track an ongoing session with said user, as claimed by applicant. However, in a related field of endeavor, Millard teaches about a mechanism for tracking traffic statistics on a per packet basis, wherein a network processor subsystem is used to track a particular session of a communication by counting the number of bytes received

by the network processor subsystem (see page 1, paragraph 0008-page 3, paragraph 0023, particularly page 2, paragraph 0016-page 3, paragraph 0023; page 6, paragraph 0057). Note: examiner considers the claimed proxy as functionally similar to the immediate prior art's network processor subsystem. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of Millard for the advantage of providing a gateway to track traffic statistics on a per packet basis to enable a variable price billing whereby a customer may balance its data traffic in response to such billing (see page 1, paragraph 0006-0007).

As per claim 5: Millard teaches a proxy (network processor subsystem) wherein the tracking means is a byte counter (see page 6, paragraph 0057).

As per claim 11: the feature of claim 11 is similar to the feature of claim 4. Hence, claim 11 is rejected on the same ground and motivation as claim 4.

As per claim 18: the feature of claim 18 is similar to the feature of claim 4. Hence, claim 18 is rejected on the same ground and motivation as claim 4.

As per claim 19: the feature of claim 19 is similar to the feature of claim 5. Hence, claim 19 is rejected on the same ground and motivation as claim 5.

Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claims above, and further in view of Capriotti et al. (Capriotti) (US 6,748,056 B1).

As per claim 7: but, the above references do not explicitly teach about a proxy (network processor subsystem) that includes a SNMP session, a POP3 session, an

IMAP session, or a streaming session. However, in a related field of endeavor, Capriotti teaches about a coordination of a telephony handset session with an e-mail session in a universal messaging system using a POP3 session protocol (see col. 11, lines 47-65). Note: when the references are combined as shown above, the POP3 session will be tracked/monitored, as discussed in the rejection of claim 4. Although there are multiple features recited in claim 7, only one needs to be satisfied and hence, POP3 is provided. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of Capriotti for the advantage of the handset to conduct session with the an e-mail server.

As per claim 13: the features of claim 13 are similar to the features of claim 7. Hence, claim 13 is rejected on the same ground and motivation as claim 7.

Allowable Subject Matter

Claims 6, 12, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 8 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed on 9/30/05 have been fully considered but they are not persuasive. Responses to corresponding arguments are provided as indexed below.

Argument I: with regard to claims 1 and 3 applicant argues by saying Gao and Wu, both singly or in combination, fail to teach or suggest a proxy comprising means for handing off a user device, in an area of overlap by different networks within an environment, including a means for handing off the device from a first network to a second network wherein the second network operates at higher bandwidth than the first network as claimed in claim 3.

Response 1: examiner respectfully disagrees. As discussed in the body of the rejection of claim 1 above, Gao teaches a handover of a mobile device in a heterogeneous network, while WU teaches a method and system for transferring/handing over a communication session in a wireless communication network wherein format trans-coding for a mobile device is provided by a proxy server (see abstract). Wu also teaches that mobile location is tracked/determined by a gateway in a network to which the proxy is a part. Regarding the argument, relating to the rejection of claim 3, Gao teaches about a heterogeneous network wherein the criteria for handover is based on QoS, which can include bandwidth variations. Hence, the argument is not persuasive.

Argument II: with regard to claims 1 and 3, applicant further argues by saying the "proxy" described in WU merely converts content formats and does not comprise "means for determining" or the "means for handing off" as claimed by applicant.

Response II: examiner respectfully disagrees with the argument. In that the claims do not exclude the conversion of formats by the "proxy". Furthermore, Wu's proxy, not

merely convert formats, as asserted by applicant, but also transfers sessions (see Wu, page 1, paragraph 0009).

Argument III: with regard to claims 14, 15 and 17, applicant argues by saying Wu's proxy is not interposed between the user device having installed web browser and said heterogeneous wireless network.

Response III: examiner disagrees with the assertion. In that the combination of Gao and Wu provide a heterogeneous network and a user device having a web browser installed. It is obvious that when the references are combined the Wu's proxy will be somewhere between said user device and the heterogeneous network. Hence, the argument is moot.

Argument IV: with regard to claims 14, 15 and 17, applicant further argues by saying Wu's proxy is not the equivalent of the claimed proxy and does not perform the same function for the purpose as applicant's proxy.

Response IV: examiner agrees in general, that the two types of proxies differ in some ways, but not to the extent claimed. The comparison should be based what is claimed, of course in light of the specification, and what is disclosed in the reference/s. in this case both the references and the specification are directed to call/session transferring/handover in a heterogeneous network using a proxy. But, so is the references teaching on the claims to the extent they are detailed. Hence, the argument is moot.

Argument V: with regard to claims 2, 9 and 16, applicant argues by saying Dilman even-driven and polling technique is restricted to a single network operator and is not

applicable to a heterogeneous network environment since nodes in different networks can not communicate with each other.

Response V: examiner respectfully disagrees with the argument. In that Dilman's network monitoring using event-driven and polling technique is applicable to a global resource, i.e., a network of interconnected nodes or resources, partitioned into a plurality of separate nodes (see abstract). Hence, the argument is not convincing.

Argument VI: with regard to claims 4, 5, 11, 18 and 19, applicant argues by saying -- form the view point of system architecture, counting the number of bytes is performed by the proxy on the client side, rather than on the edge gateway server. In addition, counting the number of bytes received by each session is for the purpose of improving the efficiency of failure recovery and minimizing the negative effects induced by the network handoff.

Response VI: examiner respectfully disagrees with the argument. Millard (see abstract) indicates that the use of byte counting include monitoring session. Furthermore, the claims do not exclude a gateway performing traffic byte counting. Still further, the claimed proxy is provided between a user device and a heterogeneous network, hence, functionally speaking, it can be considered to be on either side depending on what it does at a particular time. In terms of architecture, it was not clearly claimed that the proxy should be on the client side. Hence, the argument is moot.

Argument VII: with regard to claims 7 and 13, applicant argues by saying "there is an absence of any motivation to combine capriotti messaging system (1) in a method of handing off a user device from a first network to a second network, or (2) with a proxy

for use with a user device operating in a heterogeneous wireless network environment, as claimed in claims 7 and 13."

Response VII: examiner respectfully disagrees with the argument. In that capriotti teaches about a handset session with an E-mail server in a universal messaging system which is applicable to a Web client, such as a Web browser. This would motivate one of ordinary skill in the art to utilize the POP3 protocol for the advantage of a user to establish a POP3 session with an e-mail server (see col. 11, lines 51-61). Besides, POP3 is a know e-mail service/session protocol whoever wants to utilize it must have a compatible device. Hence, the argument is not persuasive.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meless N. Zewdu whose telephone number is (571) 272-7873. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Meless zewdu M.Z.

Examiner

02 December 2005.

WILLIAM TROST
SUPERVISORY PATENT EXAMINER
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